



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,469	09/28/2004	Shinsuke Ide	JFE-04-1218	2226

35811 7590 01/30/2007
IP GROUP OF DLA PIPER US LLP
ONE LIBERTY PLACE
1650 MARKET ST, SUITE 4900
PHILADELPHIA, PA 19103

EXAMINER

YEE, DEBORAH

ART UNIT	PAPER NUMBER
----------	--------------

1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/509,469

Applicant(s)

IDE ET AL.

Examiner

Deborah Yee

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 10-19-05;9-28-04.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1 to 21 are rejected under 35 U.S.C. 102(a) as being anticipated by European patent 1207214, cited by applicant in IDS dated 10-19-05.

3. EP'214 steel Nos. 10 and 12 in table 1 on page 10 meet the claimed composition and Mo/Nb ratio limitation recited by the claims. Moreover, table 2 on page 12 discloses steels containing Fe-Cr intermetallic compound precipitation, and paragraph [0024] teaches adding Si to accelerate precipitation (same reason as stated on page16, lines 13-21 of applicant's specification); and hence would satisfy the precipitation limitation recited by the claims. Although prior art does not disclose the mass percentage of precipitates at 0.01% or higher as recited by the claims, such would be expected since composition and process limitations are met.

4. In regard to method of making, EP'214 in paragraph [0049-0050] discloses subjecting steel to hot rolling, annealing, pickling, cold rolling and/or annealing in the same manner as claimed by applicants. In addition, paragraph [0054] further subjects steel at 900C in air for 400 hours which would cause precipitation; and hence be equivalent to the recited aging step (note applicant ages at 500-900C).

5. Moreover, paragraph [0058] discloses steel for fuel cells having high temperature resistance properties at 900C. Hence using fuel cell at operating temperature of 800C for at least 1,000 hours as recited by one or more the claims would be expected.

6. Although making fuel cell by subjecting metallic material to cutting, corrugating, etching as recited by claims 15 to 17 are not taught by prior art, such would not be a patentable difference since said process steps are conventional and well known in the art in producing fuel cells, and therefore would be implicit in making prior art fuel cell.

7. Claims 1 to 21 are anticipated rejected under 35 U.S.C. 102(b) as being anticipated by Grubb (US Patent 6.641780).

8. Grubb discloses steel examples in Table 1 of column 9 which meet the claimed composition and Mo/Nb ratio.

9. Moreover, Grubb discloses intermetallic compound precipitation comprising Cr oxides (lines 14 to 30 in column 6), Fe precipitates (line1-2 in column 7) and Si promoting the precipitation of lave phase (lines 33—43 in column 8). Even though prior art does not teach the Fe, Cr and Si precipitation area percentage of 0.01% or more as recited by the claims, such would be expected since composition and process limitations are met and in absence of proof to the contrary.

10. In regard to method, Grubb on lines 10-21 in column 10 discloses subjecting steel to hot rolling, annealing, pickling, and cold rolling in the same manner as applicant's method claims. Also lines 7 to 18 in column 21 disclose the additional step of precipitation hardening at 871 to 999C.

11. Grubb on lines 1-26 in column 1 uses metallic material for interconnects of solid-oxide fuel cells, and in figures 2-8 exhibit excellent heat resistance properties at 800-900C. Hence using fuel cell at operating temperature of 800C for at least 1,000 hours as recited by one or more the claims would be expected.

12. Although making fuel cell by subjecting metallic material to cutting, corrugating, etching as recited by claims 15 to 17 are not taught by prior art, such would not be a patentable difference since said process steps are conventional and well known in the art in producing fuel cell and therefore would be implicit in making prior art fuel cell.

Information Disclosure Statement

13. The information disclosure statement filed 10-19-05 and 9-28-04 fail to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-27211253. The examiner can normally be reached on monday-friday 6:00am-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Deborah Yee
Primary Examiner
Art Unit 1742

dy